

Case 2044***Eriophyes* von Siebold, 1851 and *Phytoptus* Dujardin, 1851 (Arachnida, Acarina): proposed designation of type species**

Evert E. Lindquist

Biosystematics Research Centre, Agriculture Canada, Ottawa, K1A 0C6, Canada

D. C. M. Manson

Ministry of Agriculture and Fisheries, Lynfield Plant Protection Centre, P.O. Box 41, Auckland, New Zealand

Abstract. The purpose of this application is the designation of type species for the eriophyoid mite genera *Eriophyes* von Siebold, 1851 and *Phytoptus* Dujardin, 1851 which accord with the long-established understanding of these economically important taxa. Changes in eriophyoid nomenclature proposed in 1971 by R. A. Newkirk and H. H. Keifer are a cause of confusion, despite being in conformity with the Code.

1. In 1971, Newkirk and Keifer published an article on a revision of the type species of *Eriophyes* von Siebold, 1851, and *Phytoptus* Dujardin, 1851, whereby the long standing usage and definition of these genera was to be drastically changed. Some of the repercussions of their revision were that species of the genus *Aceria* Keifer, 1944, would now be known as *Eriophyes*, and species of the genus *Eriophyes* as previously known would now be known as *Phytoptus*. *Phytocoptella* Newkirk and Keifer, 1971, was proposed as a new name for species previously placed in *Phytoptus*, and *Phytoptus vitis* Pagenstecher, 1857, which had been considered the type species of *Eriophyes*, was transferred to the newly proposed genus *Colomerus* Newkirk and Keifer, 1971.

2. Although these changes were in formal agreement with the International Code of Zoological Nomenclature, they were opposed by a number of acarologists internationally on the grounds that, as these were common and well known genera including a wide variety of economically important species, confusion would be caused and nomenclatural stability and universality upset. An application to the Commission, to use its plenary powers to designate type species so as to preserve the long established usage of *Phytoptus*, *Eriophyes* and *Aceria*, was made by V. G. Shevtchenko (1974; BZN 30: 196–197). Other acarologists opposing the changes instigated by Newkirk and Keifer included E. E. Lindquist, J. Boczek, S. I. Sukhareva, F. D. Sapozhnikova, R. E. Pononareva, Tz. I. Chubinishvili, D. C. M. Manson, M. K. P. Smith Meyer, G. W. Ramsay, E. Collyer, R. M. Emberson and G. P. Channabasavanna. Comments by some of them were published in the BZN (32: 17–18, 90 and 33: 147–148). Comments by Keifer, Newkirk and Jeppson in favour of the changes, and supported by 5 other American acarologists, were also published therein (32: 86–90), as were rebuttals by Shevtchenko (32: 91–94) and Lindquist and others (33: 146–148).

3. The international consensus was that these genera contain many of the most economically important and best known species of eriophyoid mites in the world, and the literature on their taxonomy, ecology and control is extensive, as was documented by Shevtchenko (BZN, 32: 91–94). In such a case, the strict application of the Code, involving the drastic changes proposed by Newkirk and Keifer, may not be in the best interests of stability and universality of nomenclature.

4. In 1977 the Commission voted on the case and overwhelmingly (by 18 votes to 3) supported the proposal by Shevtchenko and others. However, the Commission's vote was never published as an Opinion because of problems left unresolved concerning available names for the type species of *Phytoptus*, four of which are unused senior synonyms of *Phytoptus avellanae* Nalepa, 1889. The suppression of these synonyms is proposed here (see also BZN, 36: 63–64).

5. Both Shevtchenko and Lindquist predicted that confusion would occur in the literature as a result of the changes by Newkirk and Keifer, and this has certainly been borne out in the subsequent 15 years. Keifer and Newkirk (BZN, 32: 86–89) had dismissed this prediction as 'speculative, exaggerated and not warranted' when considered in the light of the relatively brief period of confusion, lasting from 1898 to about 1905, that resulted from comparable nomenclatural changes made during Nalepa's era. Yet the present period is already twice as long as that, rather than being the 'much shorter time' that they predicted, and confusion continues unabated. Nowhere is this confusion more evident than in the catalogue of eriophyoid mites by Davis *et al.* (1982), in which *Aceria* Keifer, 1944 is used for some species belonging in this genus yet not for others (including the type species of this genus, *Eriophyes tulipae*), and in which both the traditional and the changed concepts of *Phytoptus* and *Eriophyes* are used for assignment of species.

6. A further problem arose when Manson (1984a, b) pointed out that *Eriophyes vitis* (Pagenstecher, 1857) is quite distinct from, and not congeneric with, the vast majority of species in *Eriophyes*. This situation has to be resolved, either by leaving *E. vitis* in *Eriophyes* and transferring the majority of the species to another genus with a different type species, or by transferring *vitis* to another genus, i.e. *Colomerus* (as had already been done by Newkirk and Keifer (1971)), and selecting another type species for *Eriophyes*. The latter alternative was opted for, mainly because it abided by the principle of the I.C.Z.N. 1977 vote and created the least disturbance to the present classification. The new type species proposed for *Eriophyes* was *Phytoptus pyri* Pagenstecher, 1857.

7. In the light of the proposals, comments and vote referred to above the International Commission on Zoological Nomenclature is asked:

- (1) to use its plenary powers to suppress the following specific names for the purposes of the Principle of Priority but not for those of the Principle of Homonymy:
 - (a) *pseudogallarum* Vallot, 1836, as published in the binomen *Acarus pseudogallarum*;
 - (b) *coryli* Frauenfeld, 1865, as published in the binomen *Phytoptus coryli*;
 - (c) *coryligallarum* Targioni-Tozzetti, 1885, as published in the binomen *Phytoptus coryligallarum*;
 - (d) *avellanae* 'Amerling' (*sic*) Sorauer, 1886, as published in the binomen *Calycephthora avellanae*;

- (2) to use its plenary powers to set aside all previous type species designations for the genera *Phytoptus* Dujardin, 1851 and *Eriophyes* von Siebold, 1851, and to designate *Phytoptus avellanae* Nalepa, 1889 and *Phytoptus pyri* Pagenstecher, 1857 as the type species of those two genera respectively;
- (3) to place on the Official List of Generic Names in Zoology the following:
 - (a) *Phytoptus* Dujardin, 1851 (gender: masculine), type species by designation in (2) above *Phytoptus avellanae* Nalepa, 1889;
 - (b) *Eriophyes* von Siebold, 1851 (gender: masculine), type species by designation in (2) above *Phytoptus pyri* Pagenstecher, 1857;
 - (c) *Aceria* Keifer, 1944 (gender: masculine), type species by original designation *Eriophyes tulipae* Keifer, 1938;
 - (d) *Colomerus* Newkirk and Keifer, 1971 (gender: masculine), type species by original designation *Eriophyes gardeniella* Keifer, 1964;
- (4) to place on the Official List of Specific Names in Zoology the following:
 - (a) *avellanae* Nalepa, 1889, as published in the binomen *Phytoptus avellanae* (specific name of the type species of *Phytoptus* Dujardin, 1851);
 - (b) *pyri* Pagenstecher, 1857, as published in the binomen *Phytoptus pyri* (specific name of the type species of *Eriophyes* von Siebold, 1851);
 - (c) *tulipae* Keifer, 1938, as published in the binomen *Eriophyes tulipae* (specific name of the type species of *Aceria* Keifer, 1944);
 - (d) *gardeniella* Keifer, 1964, as published in the binomen *Eriophyes gardeniella* (specific name of the type species of *Colomerus* Newkirk and Keifer, 1971);
- (5) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the following, all as rejected in (1) above:
 - (a) *pseudogallarum* Vallot, 1836, as published in the binomen *Acarus pseudogallarum*;
 - (b) *coryli* Frauenfeld, 1865, as published in the binomen *Phytoptus coryli*;
 - (c) *coryligallarum* Targioni-Tozzetti, 1885, as published in the binomen *Phytoptus coryligallarum*;
 - (d) *avellanae* 'Amerling' (*sic*) Sorauer, 1886, as published in the binomen *Calycophthora avellanae*.

References

- (An extensive bibliography may be found in the previous entries relating to this case published in the BZN, i.e. 30: 196–197; 32: 17–18 and 86–94; 33: 146–148 and 36: 63–64).
- Davis, R., Flechtmann, C. H. W., Boczek, J. H. & Barké, H. E. 1982. *Catalogue of Eriophyid Mites (Acari: Eriophyoidea)*. 254 pp. Warsaw Agricultural University Press.
- Manson, D. C. M. 1984a. Eriophyoidea except Eriophyinae (Arachnida: Acari). *Fauna of New Zealand*, No. 4. 144 pp. DSIR, Wellington.
- Manson, D. C. M. 1984b. Eriophyinae (Arachnida: Acari: Eriophyoidea). *Fauna of New Zealand*, No. 5. 128 pp. DSIR, Wellington.